REMARKS

Amendments to the Specification

The current amendments place the specification paragraphs from page 7 line 23 to page 10 line 16 back into their originally-filed form (with the addition of "C_2" in the paragraph on page 9 lines 11-22 as amended on May 11, 2006). Thus, no new matter has been added.

There seems to have been some confusion regarding the reference numbers for the first and second thresholds. After careful review, Applicant has determined that the originally-filed specification did not need any correction with respect to the reference numbers for the thresholds. Applicant requests entry of these amendments to the specification because they clarify the patent application and do not raise new issues.

Amendments to the Claims

Claims 7 and 15 have been amended to revert to them to their state at the May 11, 2006 Amendment.

Applicant notes that originally-filed specification mentions that the first threshold may be higher than, equal to, or lower than the second threshold. See page 9 line 21 to page 10 line 12 of the originally-filed specification. Applicant requests entry of these amendments to the claims because they do not raise new issues.

Rejection of claims 1-12 and 14-15 under 35 U.S.C. § 103(a) in view of U.S. Pat. No. 4,061,956 (Brown) in view of U.S. Pat. No. 6,100,664 (Oglesbee)

Brown FIG. 1 proposes a DC battery charger with safety feature using a voltage sensor 66 that prevents an over-voltage charging situation by turning OFF a switch 12 when the input power voltage signal exceeds a first threshold (e.g., 29.0 volts DC). This means that, when the input power voltage is considered excessive, it is disconnected from the battery 32 and does not charge the battery 32 because the switch 12 is OFF. The switch 12 is turned ON when the input power voltage falls below a second threshold (e.g., 28.5 volts DC) as determined by the voltage sensor 66 and then the battery can safely be charged. Thus, the input power voltage is used to charge the battery only when the voltage is not above the first threshold. See Brown col. 8 lines 54-64.

Oglesby FIG. 1 shows a switched-mode battery charger that turns ON a switch 130 to short circuit the wall transformer terminals 101, 102. The short circuit pathway causes the current to increase along the pathway (from terminal 101 through ON switch 130 through resistor 150, to terminal 102). When the current sense resistor 150 indicates a first current threshold (e.g., four times the desired average charging current for the battery 30), the switch 130 turns OFF and the battery 30 is charged from the terminal 101 through the diode 140. As the battery 30 charges, the resistor 150 will sense a decreasing current. When the current sense resistor 150 decreases to a second current threshold (e.g., three times the desired average charging current for the battery 30), the switch 130 turns ON and the current is allowed to build again through the short circuit path. See Oglesby col. 2 lines 53-65 and col. 3 line 56 to col. 5 line 11.

As mentioned previously, Brown shows the reverse of the claimed limitation "activating the switch when the voltage level of the input power supply signal increases to reach the first predetermined threshold and deactivating the switch when the voltage level of the input power supply signal decreases to reach the second predetermined threshold" as recited in claim 1. Instead, Brown *de*activates (turns OFF) switch 12 when the input power voltage increases to a threshold (e.g., 29 volts DC) and *activates* (turns ON) switch 12 when the input power voltage decreases to another threshold (e.g., 28.5 volts DC).

The teachings of Oglesby fail to overcome the deficiencies of Brown because Oglesby also does not show or suggest "activating the switch when the voltage level of the input power supply signal increases to reach the first predetermined threshold and deactivating the switch when the voltage level of the input power supply signal decreases to reach the second predetermined threshold" as recited in claim 1. Instead, the switch 130 of Oglesby is activated (turned ON) when the input power current is below a threshold (e.g., three times the desired average charging current for the battery 30) and the switch 130 is deactivated (turned OFF) when the input power current is above a threshold (e.g., four times the desired average charging current for the battery 30).

In order to make the differences clear, Applicant provides the following table:

	Claims	Brown	Oglesby
Condition for activating switch (i.e., turning ON the switch)	Input power voltage level *increases to reach* a threshold (e.g., 314)	Input power voltage *falls below* a threshold (e.g., 28.5 volts DC)	Input power **current** *decreases to reach* a threshold (e.g., three times the desired average charging current)
Condition for deactivating switch (i.e., turning OFF the switch)	Input power voltage level *decreases to reach* another threshold (e.g., 316)	Input power voltage *exceeds* another threshold (e.g., 29 volts DC)	Input power **current** *increases to reach* another threshold (e.g., four times the desired average charging current).

As shown in the table, the claimed switch turns on when the input power voltage level increases to reach a threshold and turns off when the input power voltage level decreases to reach another threshold. Brown's switch does the reverse by turning on when the input power voltage falls below (i.e., *decreases* to reach) a threshold and turns off when the input power voltage exceeds (e.g., *increases* to reach) another threshold.

Oglesby is different from both the claims and Brown because it observes input power **current** instead of input power voltage. Assuming *arguendo* that voltage could be equated to current (which is not reasonable in a battery charging situation), Oglesby's switch turns on when the input power current *decreases* to reach a threshold and turns off when the input power current *increases* to reach another threshold.

The May 28, 2009 Office Action "Response to Arguments" section on pages 6-7 misinterprets the turning ON and turning OFF of the Oglesby switch 130. When the input power current increases to reach a threshold, the switch 130 turns *OFF* (is deactivated by the microprocessor 110). This differs in two ways from the claims as previously mentioned: (a) input power current v. voltage and (b) turning ON v. OFF. Over-charging is not a concern in Oglesby. Instead the switch 130 is a component of a switch mode power supply, which is a type of AC-to-DC power converter known to one of ordinary skill in the art. See Oglesby col. 1 lines 16-45. The switch 130 is not relevant to an over-voltage or safety situation.

Independent claims 1, 8, and 9 all recite variations of "activating the switch when the voltage level of the input power supply signal increases to reach the first predetermined threshold and deactivating the switch when the voltage level of the input power supply signal decreases to reach the second predetermined threshold", which is not obvious in view of Brown and Oglesby

as explained. Claims 2-7 depend on claim 1 and claims 10-15 depend on claim 9; thus the dependent claims are also not obvious in view of Brown and Oglesby. Reconsideration and withdrawal of the rejection of the claims is respectfully requested.

Conclusion

The application is in condition for allowance and a favorable response at an early date is earnestly solicited. Should the Examiner have any questions, comments, or suggestions, the Examiner is invited to contact Applicant's representative at the telephone number indicated below.

The Commissioner is hereby authorized to charge any necessary fee, or credit any overpayment, to Motorola, Inc. Deposit Account No. 50-2117.

Respectfully submitted,

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